

## Erratum to: Triple-frequency GPS precise point positioning with rapid ambiguity resolution

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### Erratum to: J Geod (2013) 87:449–460 DOI 10.1007/s00190-013-0619-2

For this paper, the authors apologize to editors and readers for a mistake in Eq. 10. The precision of the ionosphere-free wide-lane observable  $L_{xi}^j$  should be

$$\sigma_x \approx 110.0\sigma_L$$

rather than  $100.7\sigma_L$ , because the two observables in Eq. 9, i.e. wide-lane and ambiguity-fixed extra-wide-lane carrier-phase observables, are not independent, but correlated through  $L_2$ . So throughout the paper, all “100.7” should be corrected as “110.0”. In particular,

- (1) At the end of the last paragraph of Sect. 2.2.2, “... its noise is amplified to  $100.7\sigma_L$ ...” should be “... its noise is amplified to  $110.0\sigma_L$ ...”.
- (2) In Eq. 11, “ $\sigma_{Px} \approx 100.7\sigma_L$ ” should be “ $\sigma_{Px} \approx 110.0\sigma_L$ ”.
- (3) In the first paragraph of Sect. 6, “... although its noise reaches 100.7 times ...” should be “... although its noise reaches 110.0 times ...”

Since these two values (100.7 and 110.0) are close to each other, this mistake slightly affect some numerals in this paper, but does not invalidate, change or undermine our method,

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discussions, or conclusions. Some further corrections are as follows:

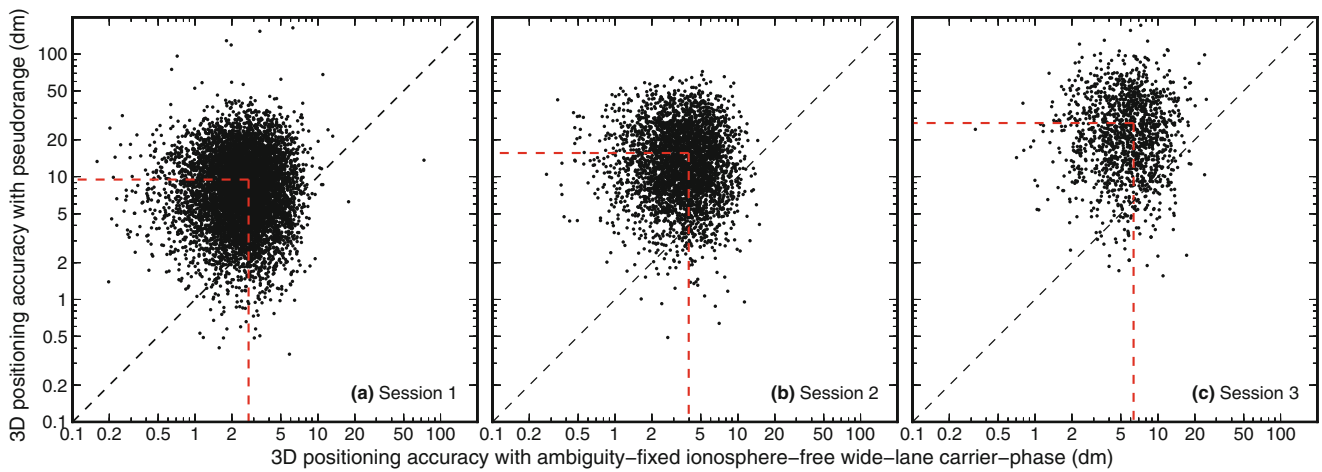
(1) The last column of Table 1 is incorrect and Table 1 should be corrected as the following table, but the caption remains the same. Correspondingly, in the second paragraph of Sect. 6, “... the wide-lane carrier-phase noise was amplified to 466.6 mm.” should be corrected as “... the wide-lane carrier-phase noise was amplified to 544.0 mm.”

Session	Signal strength	$\sigma_{L1}$	$\sigma_{L2}$	$\sigma_{L5}$	$\sigma_{Px}$
1	–150	0.7	1.8	0.6	<b>158.3</b>
2	–154	1.0	2.7	1.0	<b>239.2</b>
3	–158	1.5	6.3	1.5	<b>544.0</b>

(2) Table 2 should be slightly changed to (corrections are in bold and the caption remains the same):

Session	Pseudorange			Carrier-phase		
	East	North	Up	East	North	Up
1	2.4	2.5	11.5	<b>1.3</b>	<b>1.2</b>	<b>2.7</b>
2	3.9	4.2	17.7	1.8	1.9	<b>3.7</b>
3	6.8	8.0	31.7	2.7	3.0	5.9

(3) Figure 1 should be replaced with following figure. Actually they are almost the same and the caption remains the same. Correspondingly, at the end of the second paragraph in Sect. 4.1, “2.8, 4.0 and 6.4 dm for the carrier-phase ...” should be corrected as “2.7, 4.0 and 6.4 dm for the carrier-phase ...”.



(4) Figure 2 should be replaced with the following figure. Again, they are close to each other. The caption remains the same. Correspondingly, in the second paragraph of Sect. 4.2, “99, 90 and 47 % with 10 epochs ...” should be “99, 92 and 44 % with 10 epochs ...”.

(5) Figure 3 should be replaced with the following figure, but actually they are quite similar. The caption, all statistics and descriptions in Sect. 4.3 remain the same.

